

DECLARATION

I, Ryu MIYAMOTO, c/o the Inoue & Associates of 3rd Floor, Akasaka Habitation Building, 3-5, Akasaka 1-chome, Minato-ku, Tokyo, Japan do solemnly and sincerely declare that I am conversant with the Japanese and English languages and that I believe:

that the description "0.06" at page 23, line 10 of the English specification should be amended to --0.60--; that the description "5" at page 66, line 2 of the English specification should be amended to --0.5--.

These amendments are merely corrections of inadvertent errors which occurred at the time of the translation into English of the original PCT specification. The attached copies of revised pages 23 and 66 of the English specification are true and correct translations of the corresponding pages of the international patent application No. PCT/JP03/00858. The English description "0.60" in the English specification at page 23, line 10 is a correct English translation of the Japanese description "0.60" in the original Japanese PCT specification at page 16, lines 12. The English description "0.5" in the English specification at page 66, line 2 is a correct English translation of the Japanese description "0.

5 " in the original Japanese PCT specification at page 46, line 6.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

December 7, 2005

(Date)

Ryu Miyamoto
Ryu MIYAMOTO

weight of the aqueous solution (A), wherein the weight of the glycolic acid condensation product is expressed in terms of the weight of component monomeric glycolic acid of the glycolic acid condensation product. The calculated monomeric glycolic acid weight ratio is preferably from 0.70 to 0.95, more preferably from 0.75 to 0.93.

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When the aqueous glycolic acid solution (A) has a calculated monomeric glycolic acid weight ratio of less than 0.60, the yield of the final glycolic acid crystals becomes disadvantageously low. On the other hand, when the aqueous glycolic acid solution (A) has a calculated monomeric glycolic acid weight ratio of more than 1.00, problems arise not only in that the purity of the final glycolic acid crystals is lowered, but also in that the aqueous glycolic acid solution or the glycolic acid crystals-containing slurry which is obtained after the deposition of glycolic acid crystals from the aqueous glycolic acid solution becomes too viscous, such that the handling property thereof is lowered and it becomes difficult to separate the deposited glycolic acid crystals from the aqueous glycolic acid solution.

Next, explanation is made with respect to the above-mentioned characteristic (c).

acid solution

About 0.5 g of an aqueous glycolic acid solution (hereinafter, referred to as "feedstock liquid") was weighed and fed into a 50 ml-volumetric flask. Then, 0.1 g of n-dodecane was weighed and added to the aqueous glycolic acid solution as an internal standard. The resultant mixture in the volumetric flask was diluted with dehydrated pyridine to obtain 50 ml of a diluted solution. Then, 0.3 ml of the diluted solution was added to 1 ml of N,O-bis-trimethylsilylacetamide, and the resultant mixture was allowed to stand at room temperature for 1 hour, thereby obtaining a sample solution. The sample solution was analyzed by gas chromatography (GC) under the following conditions:

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Column: DB-1 (trade name; manufactured and sold by J&W Scientific, U.S.A) (column length: 30 m, inner diameter: 0.25 mm, film thickness: 1 μ m);

Carrier gas: helium;

Detector: hydrogen flame ionization detector (FID);
Injection temperature: 250 °C;

Detector temperature: 300 °C; and

Column temperature: first, the column temperature was elevated from 50 to 100 °C at a rate of 10 °C/min and maintained at 100 °C for 10 minutes and, then, ele-

定装置を用いて行う。

特性(b)について説明する。上記のようにグリコール酸水溶液(A)は、単量体グリコール酸及び該グリコール酸縮合物を含有するが、該単量体グリコール酸の質量と、成分単量体グリコール酸の質量に換算した該グリコール酸縮合物の質量との合計の、該グリコール酸水溶液(A)に対する質量比として定義される換算単量体グリコール酸質量比は、0.60~1.00でなければならない。

グリコール酸水溶液(A)の換算単量体グリコール酸質量 比は、好ましくは 0.70~0.95、さらに好ましくは 0.75~0.93である。

換算単量体グリコール酸質量比が 0. 6 0 未満である場合には、得られる結晶の収率が著しく低下する。一方、換算単量体グリコール酸質量比が 1. 0 0 を越える場合には、得られるグリコール酸結晶の純度が低下するという問題だけでなく、グリコール酸水溶液、或いは、グリコール酸結晶を析出させた後に得られる、グリコール酸結晶を含むスラリーの粘度が高くなるため、取り扱い性が悪くなる、結晶を析出させた後の分離操作が困難となる、といった問題が生ずる。

特性(c)について説明する。グリコール酸水溶液(A)の単量体グリコール酸含有率は20~57質量%であり、好ましくは35~56質量%、さらに好ましくは40~55質量%である。

よって求める。

グリコール酸水溶液中の塩化ナトリウム含有率(質量%)

= グリコール酸水溶液中のナトリウムイオン含有率 + グリコール酸水溶液中の塩素イオンの含有率

(6) グリコール酸水溶液の単量体グリコール酸含有率

50mlのメスフラスコに、約0.5gのグリコール酸水溶液(以下、「原液」と称する)を秤量採取し、更に、内部標準としてnードデカンを0.1g秤量添加後、脱水ピリジンで50mlに希釈する。希釈溶液を1mlのN,Oービストリメチルシリルアセトアミドに0.3ml添加した後、室温にて1時間放置することにより、サンプル溶液を得る。このサンプル溶液を、ガスクロマトグラフィーにより、下記の測定条件にて分析する。

<ガスクロマトグラフィー測定条件>

カラム:米国J&W Scientific (株)製 商 品名 DB-1、長さ30m、内径0.25mm、 液膜1μm

キャリアーガス: ヘリウム

検出器:水素炎イオン化検出器

インジェクション温度:250℃